

# **Presentation Acronyms**

- CCF Hundred Cubic Feet
- CCTV Closed Circuit Television Inspection
- CMOM Capacity Management Operations & Maintenance
- CIP Capital Improvement Program
- Cove Wethersfield Cove Note: Total elimination of CSOs required
- CSO Combined Sewer Overflow
- CTDEEP Connecticut Department of Energy & Environmental Protection
- CWF/SRF Clean Water Fund/State Revolving Fund
- CWP Clean Water Project
- CWPC Clean Water Project Charge (Formerly SSSC Special Sewer Service Charge)
- EPA Environmental Protection Agency
- I/I Infiltration & Inflow
- IP Integrated Plan
- LTCP Long Term Control Plan
- MG/MGD Million Gallons/Million Gallons per Day
- MHI Median Household Income
- MS4 Municipal Separate Storm Sewer Systems
- NBPR North Branch Park River Note: Total elimination of CSOs required
- NTS Newington Trunk Sewer
- O&M Operations and Maintenance
- PMU Program Management Unit
- R&R Rehabilitation & Replacement
- SSO Sanitary Sewer Overflow
- WPCF/WWTP Water Pollution Control Facility/Wastewater Treatment Plant
- 1-year storm Design storm for CSO Consent Order with CTDEEP
- Typical year All rain events in a typical year with no storms bigger than a 1 year storm

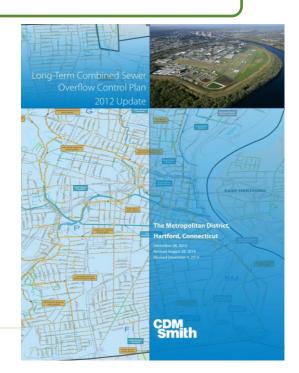
# Agenda

- 1. Quick Summary of LTCP Evolution and Accomplishments
- 2. Moving Forward, MDC Proposing Integrated Plan
  - Where did concept of Integrated Planning come from?
  - Why move in this direction?
  - High Points of Recommended Technical Plan
  - Baseline assumption = sewer system renewal
- 3. Evaluation of Alternatives for Implementation
- 4. Next Steps/Schedule

# Clean Water Project (CWP) requires CSO Long-Term Control Plan (LTCP)

- 2005 LTCP approved by CT DEEP in 2007
- LTCP required to be updated every 5 years
- 2012 LTCP Update approved by CT DEEP in 2014
- Next LTCP Update due to CT DEEP December 2018





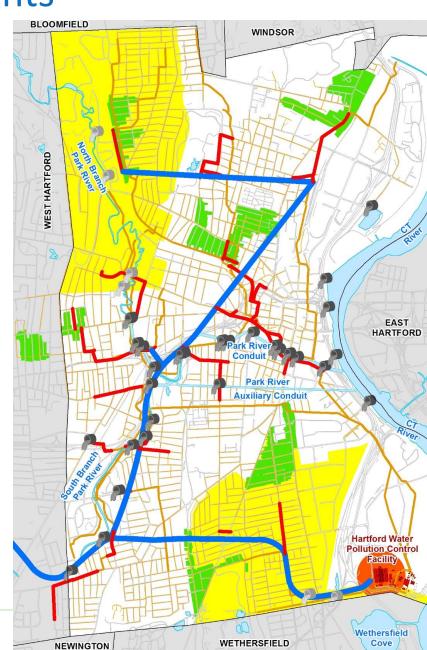
# Prior 2014 LTCP Plan Highlights

## **Ongoing/Completed:**

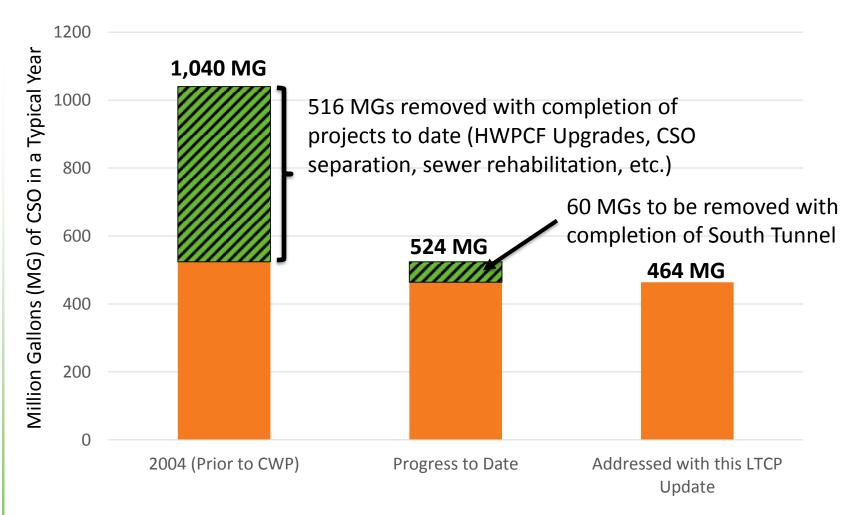
- Continue sewer rehabilitation
- Complete sewer separation (green areas)
- Complete HWPCF improvements (Southeast Hartford)
- 1/2024: South Tunnel online (eliminate CSOs to Cove and Newington/West Hartford SSOs)

### Remaining:

- 2029: North tunnel online. Primary reasons for tunnel:
  - Eliminate CSOs to NBPR
  - Capture remaining CSOs up to & including 1-year storm



# Clean Water Program Progress – Typical Year

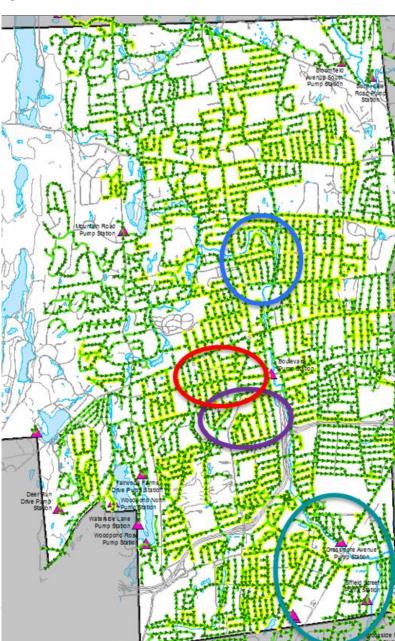


 Save the Sound just released report couple weeks ago that Long Island Sound water quality is improving - <a href="http://www.ctenvironment.org/save-the-sound/">http://www.ctenvironment.org/save-the-sound/</a>

# What Has Been Completed in/for West Hartford?

- 36% of system has been rehabilitated since 2005
- Other recently completed projects
  - Greenhurst Road Area
  - Four Mile Road Area
  - Montclair & Linbrook Road Area
- Projects Under Construction
  - South Tunnel





# Next CSO LTCP Update/ Integrated Plan

- EPA guidance from 2012 allows for Integrated Planning
  - CSO Consent Order CT DEEP Approval
  - ➤ SSO Consent Decree EPA Approval
  - Sewer system investigation/repair (CMOM)
  - > Stormwater (i.e., MS4)
- Consider affordability analysis



#### National Pollutant Discharge Elimination System (NPDES)

#### Integrated Planning for Municipal Stormwater and Wastewater

On this page:

- · Overview
- · Resources
- · Technical Assistance

#### Overview

EPA, states, and municipalities have achieved real progress in implementing the Clean Water Act (CWA) (PDF) (234 pp, 571 K, About PDF) and protecting public health and the environment. However, today there are many factors stressing the implementation of CWA programs. Stressors include population growth, aging infrastructure, increasingly complex water quality issues, limited resources, and other economic challenges. Currently, EPA, states, and municipalities often focus on each CWA requirement individually. This may not be the best way to address these stressors and may have the unintended consequence of constraining a municipality from addressing its most serious water quality issues first.

An integrated planning approach offers a voluntary opportunity for a municipality to propose to meet multiple CWA requirements by identifying efficiencies from separate wastewater and stormwater programs and sequencing investments so that the highest priority projects come first. This approach can also lead to more sustainable and comprehensive solutions, such as green infrastructure, that improve water quality and provide multiple benefits that enhance community vitality.

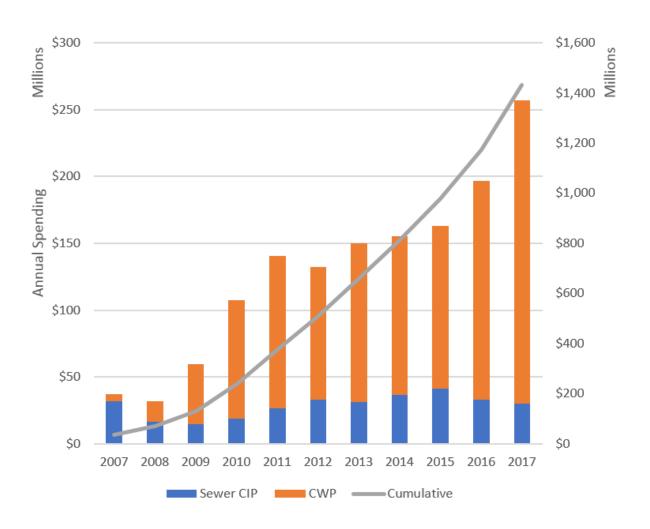
The integrated planning approach is not about changing existing regulatory or permitting standards or delaying necessary improvements. Rather, it is an option to help municipalities meet their CWA obligations while optimizing their infrastructure investments through the appropriate sequencing of work.

#### Resources

- Memorandum: Achieving Water Quality Through Integrated Municipal Stormwater and Wastewater Plans
- Integrated Municipal Stormwater and Wastewater Planning Approach Framework Provides guidance for EPA, states, and local governments to develop and implement effective integrated plans under the CWA. This framework was finalized after extensive public input including a series of workshops across the country.
- Combined Sewer Overflows Guidance for Financial Capability Assessment and Schedule Development (FCA Guidance) - Provides an aid for assessing financial capability as part of negotiating schedules for CWA requirements for municipalities and local authorities.
- · Financial Capability Assessment Framework Provides greater clarify on the flexibilities built into

# Why Integrated Planning?

#### **CIP Sewer and Clean Water Project Expenditures**



MDC spending rate over the last decade is not sustainable

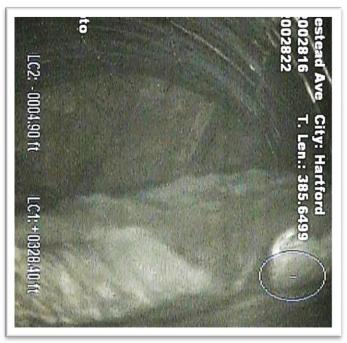
# Why Integrated Planning?



Asylum Avenue West Hartford August 2018



Park Avenue East Hartford July 2017



Homestead Avenue Hartford October 2017



Capen Street Hartford September 2018



Phillip Drive West Hartford May 2016

In 2017, MDC performed 17 emergency repairs at a cost of about \$3.5M total

## Why Integrated Planning?







**Main Street East Hartford** 

**Old North Branch Interceptor Hartford** 

**Capen Street Hartford** 

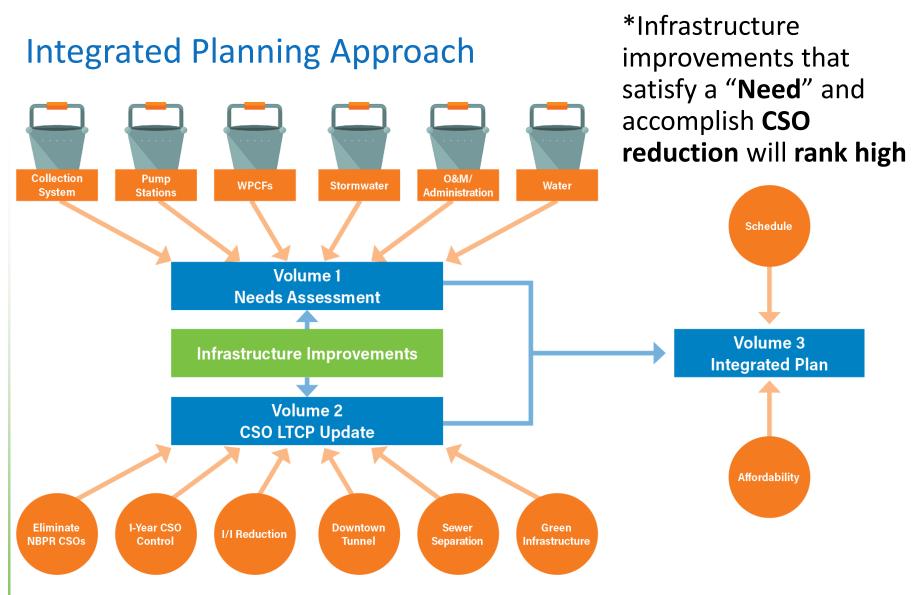


Milton Street West Hartford



**Ringgold Street West Hartford** 

Inspection of sewers has identified \$450M in additional repairs needed These repairs would have been funded by Ad Valorem



Sewer Renewal: Dual benefit of repairing infrastructure and further controlling wet weather response in some areas

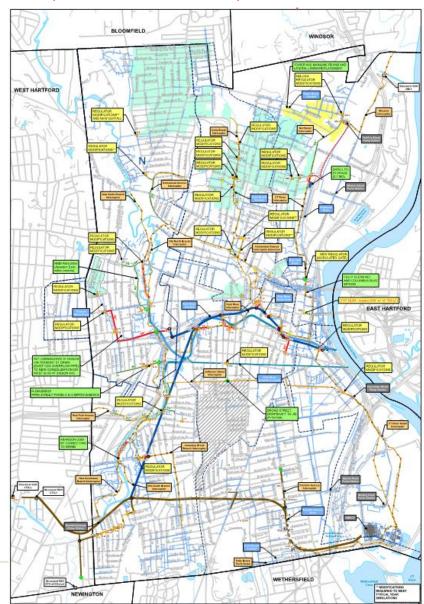
**Coordination with aging water main infrastructure improvements** 

# Two Primary Options for Remainder of LTCP

#### **North Tunnel Plan**

# WEST HARTFORD

#### Proposed Plan with Separation in North



# Comparison of Northern Area CSO Alternatives

#### North Tunnel Plan

- Less expensive (\$282M)
- Spending over 14 years
- Addresses CSOs only. Limited renewal of existing assets.
   Avg. sewer age increases to ~80 yrs
- One large project
- Can't be phased
- Likely need to start tunnel now
- More risk
- Project has less disruption to community

## Sewer Separation Plan in North

- More expensive (\$350M)
- Spending over 40 years
- Renew existing assets
   Avg. sewer age reduces to ~45 yrs
- Multiple "smaller" projects
- Can be phased, gain intermediate levels of control as plan progresses
- Sewer separation can be combined with other street work to limit disturbances – INTEGRATED PLANNING
- Separation add drainage pipe and outfalls MS4 issues?

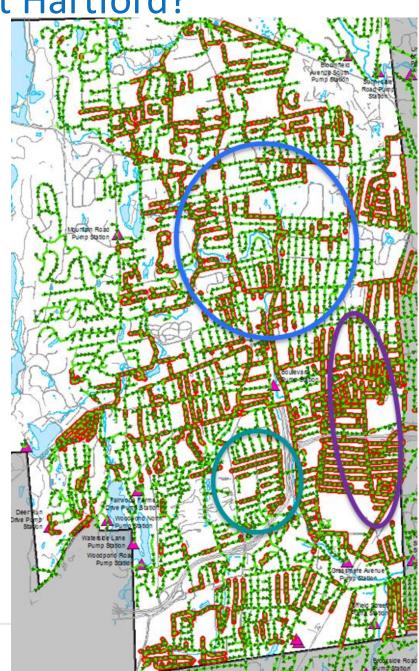
# Sewer Collection System Renewal = I/I Reduction

		Sewer Rehabilitation (%)		Sewer Age (years)			
Town	Miles	Completed	Recommended	Total	Prior to CWP (2005)	If Infrastructure Ignored (2038)	
Bloomfield	118	6%	35%	41%	34 yrs	67 yrs	45 yrs
East Hartford	168	3%	23%	26%	45 yrs	78 yrs	58 yrs
Hartford	217	5%	67%	72%	74 yrs	107 yrs	35 yrs
Newington	128	27%	14%	41%	38 yrs	71 yrs	50 yrs
Rocky Hill	90	7%	10%	17%	30 yrs	61 yrs	54 yrs
West Hartford	223	36%	43%	79%	53 yrs	84 yrs	35 yrs
Wethersfield	122	32%	22%	54%	45 yrs	76 yrs	43 yrs
Windsor	152	18%	12%	30%	36 yrs	67 yrs	49 yrs
Total	1,218	17%	33%	50%	50 yrs	81 yrs	45 yrs

What is proposed in/for West Hartford?

- Additional 43% of sewer system rehabilitation throughout Town (total of 79% of sewers in Town)
- Future projects
  - Oakwood Ave Sewer & Water
  - Webster Hill Blvd Sewer & Water
  - WH29, 30, and 31 I/I Reductions and Capacity Improvements





## MDC Customers Pay for Sewer in Two Primary Ways

- 1) Clean Water Project Charge (CWPC) on water bill allocated to customers based on metered water consumption
  - Payment of water bill for water related charges is separate
- 2) Property tax payments for MDC assessment (Ad Valorem
  - Property owners pay directly through town tax bill
  - Renters pay indirectly through rental payments
  - Tax exempts charged sewer rate directly (Sewer User Charge)

To address EPA affordability process need to estimate the total combined cost per dwelling unit



#### MDC The Metropolitan District

555 Main Street, P.O. Box 800 Hartford, Connecticut 06142-0800 Telephone: (860) 278-7850

www.themdc.org

Account Number	Invoice Number	Page
0000000	0000000000000	2 of 2
1		

Service Address: 1 MAIN ST, WEST HARTFORD CT

Customer Name: MRS. SMITH

Billing Period: 08/21/2018 - 09/20/2018 (31 Days)

#### METER READINGS

# Meter Num/Size 00000000 /5/8"X3/4" Current Reading (09/20/2018) 351.03 Previous Reading (08/20/2018) 339.17 Water Use CCF 5.83

#### CURRENT CHARGES

Water Service:	
2018 Water Used Charge @ \$ 3.140 X 5.83 CCF	
(MDC Water rate is 0 0042 Cents per US-Gallon)	

2018 Water Customer Srvc Charge 14.98 Sub Total: \$33.28

18.30

Sewer Service:

2018 Sewer Customer Srvc Charge 3.00 Sub Total: \$3.00

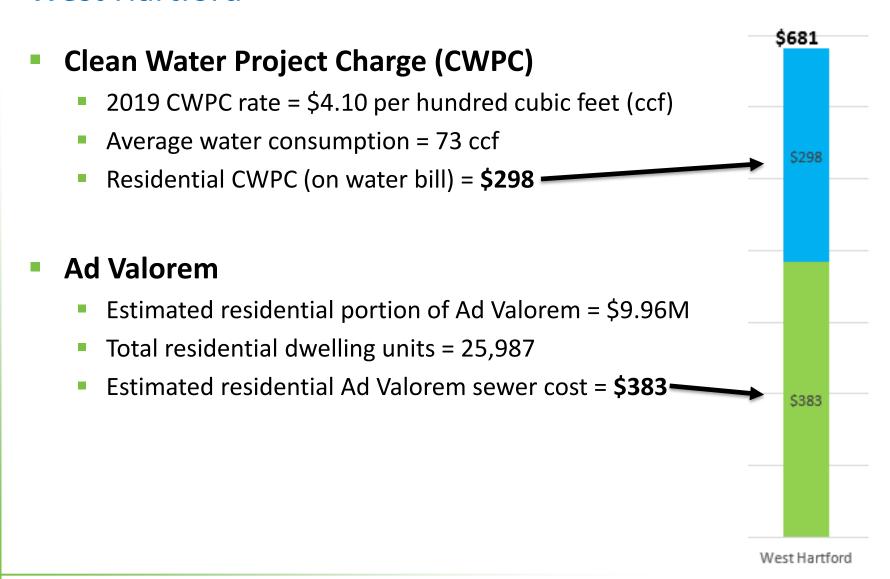


#### Federal / State Regulatory Compliance Fees:

2018 CWP Charge @ \$ 3.800 X 5.83 CCF 22.15 2018 DPH Drinking Water Fee 0.33 **Sub Total:** \$22.48

TOTAL CURRENT CHARGES \$ 58.76

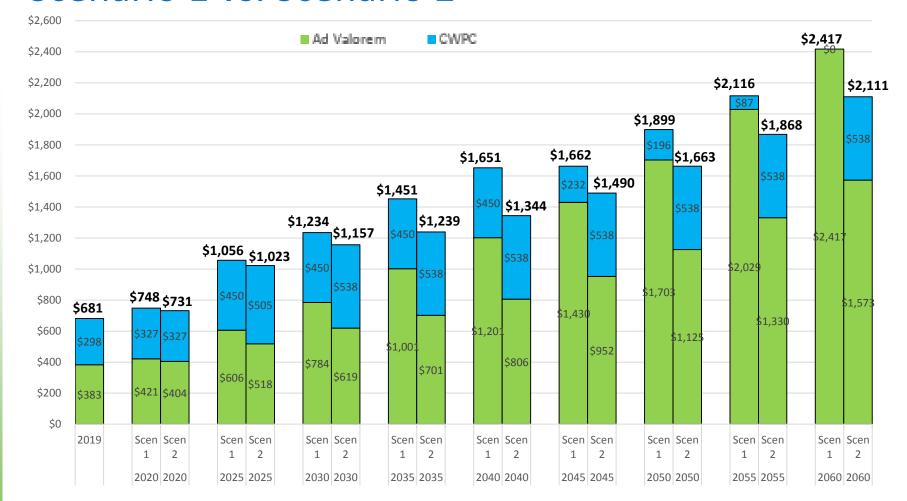
# Projected Dwelling Unit Sewer Costs for 2019 West Hartford



# **Summary of Scenarios**

Ad Valorem Elements	Clean Water Project Charge (CWPC)		
Scenario 1"Realistic Current Program"	V60 27 38 38		
Operating budget escalated from approved budget	CWP completed by 2032		
Existing debt schedule	CWPC modified from \$5.30 peak to reflect change		
Capital Spending\$37m/yr CIP inflated	Includes North Tunnel and Downtown Tunnel		
\$10m emergency repair	Full state SRF and grant support		
\$5m for WWTP R&R	Total consumption at 16.1 m ccf		
\$22m for new projects	Dwelling Unit consumption at "actual"		
Combined CIP at \$8.1m	PMU costs gradually down		
Scenario 2Full IP, CWPC Cap lifted, 40 year implementation	n, Ad Valorem \$15m		
Same Operating budget as Scen 1	Full IP on CWPC, completed over 40 years		
Existing debt service as Scen 1	CWPC Increases to fund program		
CIP \$15m/yr inflated	Includes Downtown Tunnel and additional north separation		
Combined CIP \$8.1m	Full state SRF and grant support		
	Total consumption at 16.1 m ccf		
	Dwelling Unit consumption at "actual"		
	PMU costs gradually down		

# Annual Total Household Bills – West Hartford Scenario 1 vs. Scenario 2



#### Similar household bills, but different programs

- Scenario 1 builds tunnel sooner and sewers continue to fail/repaired on Ad Valorem Infrastructure Renewal Delayed
- Scenario 2 delays tunnel, focuses on Integrated Plan projects that address sewer system while reducing CSOs, and moves burden from Ad Valorem to Clean Water Project Charge (CPWC) – Infrastructure Renewal Quicker

# Integrated Plan/Outreach Schedule

- 17 meetings with CT DEEP to discuss Integrated Plan and/or review/rank projects
- Presented to MDC Bureau of Public Works in 2 Workshops
- Presented to and approved by MDC District Board October 1<sup>st</sup>
- Town Council and public information meetings
  - Newington October 9<sup>th</sup>
  - Wethersfield October 15<sup>th</sup>
  - East Hartford October 16<sup>th</sup>
  - West Hartford October 23<sup>rd</sup>
  - Windsor November 5<sup>th</sup>
  - Bloomfield November 13<sup>th</sup>
  - Rocky Hill November 19<sup>th</sup>
  - Hartford TBD
- Final Draft IP to District November
- Public Hearing December 11<sup>th</sup> or 12<sup>th</sup> in Hartford
- All three volumes submitted to DEEP by December 31st

# **Next Steps**

- We are asking for your support
- Please email District Clerk, John Mirtle, at <u>JMirtle@themdc.com</u> with any questions, comments or letters of support

• Questions?